



Yankee Air Museum Safety Management System (SMS) Manual

Safety Management System

Safety Management System A Participative and Systematic Approach to Develop Policies and Procedures to Achieve Flight Safety Objectives

Safety Management Systems (SMS) Defined

A Safety Management System (SMS) is a systematic approach to managing flight safety. SMS provides management with a set of tools to make safety-related decisions. SMS also helps management identify safety risks associated with all operations. SMS is a proactive program to address those issues before they result in accidents, incidents, injuries, or damages. SMS works through a series of complementary processes and procedures. These are closely coordinated by a well-defined structure in which everyone is aware and understands. Further, safety objectives and data analysis will facilitate a continually improving safety environment throughout the Yankee Air Museum.

Purpose

This document outlines the SMS within the Flight Operations Department at the Yankee Air Museum (YAM) and prescribes a systematic approach to develop safety policies, procedures, and practices that will achieve the SMS objectives. These methods are consistent with generally accepted and established industry practices and procedures. This document is under continual review.

Regulatory Compliance

The museum's Flight Operations Department adheres to the established criteria and follows the Federal Aviation Administration (FAA) guidance suggested in AC 120/92B.

Promotion of a Positive Safety Culture

The YAM SMS is founded on a principle that accident prevention comes from a strong safety culture. According to AC 120-92B (2015), "an organization's culture consists of its values, beliefs, legends, rituals, mission goals, performance measures, and sense of responsibility to its employees, customers, and the community". This museum strives to ensure the promotion of a strong safety culture in all our activities.

/s/

Kevin Walsh

Executive Director

Yankee Air Museum

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Chap 1 Safety Policy, Goals, and Objectives

The Yankee Air Museum Flight Operations Department recognizes the critical nature of a Safety Management System (SMS). Therefore, YAM is committed to an effective SMS and to its continuous improvement.

All crew members, volunteers, and paid employees in the department have the responsibility to perform their duties and activities in the safest practical manner. YAM will establish specific safety-related objectives and to ensure that these are met, monitored, measured, and tracked. YAM is committed to providing the necessary financial, personnel, and other resources for this purpose and has established a confidential reporting system to report all hazards, accidents, incidents, and safety issues.

As a component of the SMS, YAM is committed to an established emergency response procedure and plan that provides for the safe transition from normal to emergency operations.

YAM will convey this expectation through postings, emails, meetings, and other means to ensure awareness of the organization's SMS and our safety policy.

YAM is dedicated to creating a safe environment, expects continuous safety improvement, and attempts to proactively identify hazards through the use of a confidential hazard reporting system. Our organization fully supports and encourages a culture of openness and trust between all personnel. This cannot be achieved unless employees feel they are able to report occurrences or hazards without the fear of unwarranted retribution. To that end, personnel reporting safety-related issues shall not be subject to disciplinary action except where there is clear evidence of:

- Gross negligence.
- Intentional disregard of regulations or procedures.
- Attempted cover up.
- Criminal intent; or
- Use of illicit substances.

The SMS is designed to prevent accidents and maintain a strong safety culture. YAM will manage the SMS so that hazards are identified and mitigated to prevent accidents.

YAM will strive to meet the stated goals through encouragement of the use of hazard reports, by increasing communication and feedback to flight crews, paid employees, and volunteers

/s/

Jon Rule

Director of Flight Operations

Flight Operations Department

Safety Organization

The Director of Flight Operations has the ultimate responsibility to ensure that YAM maintains a strong safety culture.

The responsibility of maintaining an effective SMS is assigned to the Safety Officer/SMS Coordinator. The Safety Officer/SMS Coordinator will work with the Safety Review Committee to ensure that appropriate policies and procedures are disseminated, and that a strong safety culture is encouraged.

Flight Crews, paid employees, and volunteers at all levels are responsible for the implementation of the SMS. Further, all YAM individuals are responsible for hazard identification and incident/accident prevention.

Designation and Responsibilities of Safety Management Personnel

Director of Flight Operations

The Director of Flight Operations is Jon Rule. The DFO is responsible for the application of flight safety policies. This helps ensure that the day-to-day operation of the organization and its aircraft are safe as possible.

The DFO, irrespective of other functions, satisfies the following for YAM:

- Is the final authority over flight operations.
- Controls the human resources such as pilot selection.
- Retains ultimate responsibility for safety.

Responsibilities

The DFO is responsible for the following:

- Ensures that the SMS is properly implemented in all areas of the organization.
- Develops the Department's Safety Policy statement.
- Communicates the safety policy statement throughout the department.
- Regularly reviews the safety policy statement to ensure that it remains relevant and appropriate to YAM.

Flying Safety Officer/SMS Coordinator

The Flying Safety Officer/SMS Coordinator is Randy Hotton. It is the responsibility of the Flying Safety Officer/SMS Coordinator to:

- Coordinate the implementation, maintenance, and integration of the SMS.
- Ensure safety promotion throughout the Department.
- Maintain, review, and recommend revisions to the SMS for YAM.
- Regularly report on the performance of the SMS to the Director of Flight Operations.
- Facilitate hazard identification and safety risk analysis.
- Monitor the effectiveness of risk controls.
- Maintain the confidential hazard reporting system.
- Investigate of any event reported via the hazard reporting system.
- Remediate, if necessary, any personnel involved in a reported safety-related event.
- Provide feedback on all reports submitted through the hazard reporting system.
- Develop and maintain Safety Risk Management procedures.
- Conduct Safety Risk Assessments, as necessary.
- Monitor the effectiveness of safety risk controls.
- Distribute aviation safety information.
- Develop and maintain an Emergency Response Manual (ERM).
- Annually assess the organization's safety culture.
- Chair the SRC.

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Chapter 2 Safety Review Committee (SRC)

The SRC addresses safety and operational concerns for YAM. The SRC reviews incidents and accidents as applicable and makes recommendations to modify flight training procedures and policies, as necessary.

Membership

Members of the SRC are selected to address the safety interests of the YAM. Departments represented include Maintenance, Security, the Chief Pilots, the Ramp Crew Department, and the YAM Board of Directors. Membership from the above departments does not have a term length or expiration.

Safety Review Committee Responsibilities

It will be the responsibility of the SRC to:

- Address safety and operational concerns for YAM.
- Review accidents and incidents involving YAM aircraft.
- Make recommendations to modify flight training procedures and policies, as necessary.
- Assist the Safety Officer/SMS Coordinator in safety risk management and safety training and promotion.

Safety Review Committee Members

Chair, Randy Hotton
Maintenance, Angel Estrada
Maintenance, Tom Collard
Maintenance, Paul Hakala
C-47 Chief Pilot, Grant Swartz
B-17 Chief Pilot, Gene Wedekemper
B-25 Chief Pilot, Bill Clark
UH-1H Chief Pilot, James Wise
Ford Trimotor Chief Pilot, Cody Welch
Security, Kevin Perlono
Ramp Services, Harry Terpstra
YAM Board of Directors, Peter Deloof

Safety Review Committee Meeting Schedule

The Safety Review Committee will meet once per quarter to review operations and progress of SMS program, the quarterly meeting can be waived by the Safety Officer should there be no new business for the Committee to review. The Committee will also meet on as needed basis when safety reports are submitted that require short notice attention.

Safety Review Committee Meeting Structure

Four of the members or their representative plus the Safety Officer will constitute a quorum for a SRC meeting. The SRC will review all HIR's (Appendix 1) and FIR's (Appendix 2.) After reviewing all HIR's and FIR's, the SRC will make corrective action recommendations. SRC minutes will be maintained for SRC meetings.

The SRC minutes will be shared with all SRC members. The YAM Board of Directors will be briefed on SRC findings at the Board of Director's Meetings

Safety Review Committee Meeting Format

Safety Review Committee meeting will generally follow this format

- Roll Call
- Review of previous meeting minutes
- Review of submitted HIR incidents
 - Description of event
 - Findings of fact
 - Conclusions
 - Recommendations
- Other Safety issues
 - Manuals
 - Maintenance
 - Staffing
 - Training
- Safety culture

Chap 3 Coordination of Emergency Response Planning

It will be the policy of YAM to prevent accidents by placing safety as a paramount consideration above all others. In the event of an accident, every consideration must be given to injured and non-injured passengers and immediate families of passengers and crew. This concept also applies to the physical and mental comfort of passengers and their immediate families.

The key to effective accident response is communication. A communications link, such as cell phone, between the scene of an accident and YAM offices at HQ is essential to an effective response. The following personnel will be immediately notified in the event of an incident, accident, or any other situation deemed necessary by any flight crew member, involving a YAM aircraft.

YAM Key Personnel Roster

Executive Director, Kevin Walsh, 734 637-8880

Director of Flight Operations, Jon Rule, 734 717-0515

Chairman of the Board of Directors, Ray Hunter, 734 645-3187

Flying Safety Officer, Randy Hotton, 734 255-5895

YAM Board Member, Peter Deloof, 734 717-7195

SMS Documentation

- SMS documentation should include all records associated with the SMS program. It will include but is not limited to:
- Records of audits, safety meetings and management reviews.
- Records of risk assessments.
- All safety reports by individuals.

Chap 4 Safety Risk Management and Hazard Identification Reporting (HIR)

The following provides a guideline for determining whether a situation warrants the submission of a hazard identification report. This description is not all-inclusive, and the originator should exercise sound judgment and discretion when determining if a report should be submitted. A Hazard Identification Report or HIR, shall be submitted when any situation, practice, procedure, or process is observed that is

- A recognized safety concern, or
- Considered unusual from an operational or procedural standpoint, or
- Considered deficient from a safety standpoint, and in the submitter's opinion, possesses a foreseeable potential for injury or illness to persons or damage or loss of property if not addressed in a timely manner.

Hazard Identification Forms may be found at Appendix 1.

Additionally, a Flight Operations Incident Report, or FIR, shall be submitted when any of the following occurs during operation on the ground or in flight. This form may be found at Appendix 2.

- System defects which could or will adversely affect the handling characteristics of the aircraft and renders it un-flyable
- Warning of fire or smoke
- Declaration of an in-flight emergency
- Safety equipment or procedures are defective or inadequate
- Deficiencies exist in operating procedures or instructions
- Incorrect loading of fuel or cargo or the discovery of the presence of dangerous goods
- Operating standards are degraded
- Any engine shutdown in flight
- Ground damage occurs to any equipment
- A rejected take-off is executed
- A runway or taxiway incursion occurs
- A navigation error involving a significant deviation from track
- An altitude excursion of more than 400 feet occurs
- Exceeding limiting parameters for the aircraft configuration
- Communications fail or are impaired
- A stall warning occurs, other than just prior to touchdown
- A heavy or hard landing check is required
- Loss of braking
- Elevator trim malfunctions of any type
- Aircraft is evacuated
- Aircraft lands with less than reserve fuel remaining

- Wake turbulence event occurs that is more than routine
- Wind shear or other severe weather is encountered
- Crew or passengers become seriously ill, injured, or are incapacitated
- Any part of the aircraft or its equipment is sabotaged or vandalized
- Security procedures are breached
- Bird strike or Foreign Object Damage

Any other event considered to have or potentially have serious safety implications will be reported. The report submitter's identification on the report is optional but is encouraged in the event that further information is required for elimination of the hazard. Reports should be concise and should accurately and thoroughly describe the hazard. When applicable, reports should include the submitter's recommendation(s) for corrective action. In circumstances where the perceived hazard possesses the immediate potential for injury/illness to persons or damage/loss of property, the Safety Officer or the Director of Flight Operations shall be notified immediately by the most expeditious means possible for the purpose of determining appropriate action to prevent such injury/illness or damage/loss.

Safety Assurance

Safety assurance enables YAM to establish processes and procedures to monitor the effectiveness of the SMS. YAM maintains a confidential hazard reporting system with procedures for reporting critical safety information to the Flying Safety Officer. Safety Assurance processes then use the data collected to evaluate whether or not the risks assessed have been mitigated.

There are several key safety assurance activities performed by YAM to support the SMS. Some of these include:

- Evaluate the continued effectiveness of risk mitigation strategies.
- Support the identification of new hazards.
- Provide evidence that the department is attaining safety objectives through continuous improvement.
- Retention of all data collected.

Some of the steps to establish safety assurance performance objectives include:

- Develop and implement a means for monitoring safety performance.
- Establish and maintain a hazard reporting system that provides a means to keep the identity of the reporter confidential.
- Develop and implement a process for reporting pertinent safety information and data to the Director of Flight Operations on a regular basis.
- YAM will monitor its systems to:
- Identify new hazards
- Measure the effectiveness of safety risk controls
- Ensure compliance with regulatory requirements

Safety Promotion

Safety promotion combines communication and training on safety information to all within the organization. YAM will enhance safety performance through a positive safety culture. Safety Promotion within YAM will rely on management involvement in developing and using SMS while effectively communicating safety information, changes, and resources available to everyone in the organization. All aircrew, paid employees, and volunteers will receive training to promote safe practices and hazard reporting.

YAM is committed to the development of a positive safety culture. YAM defines its safety culture as the adoption of safety conscious behavior and practices by all members of the organization. YAM recognizes the dynamic relationship that exists between employees and their working environment. YAM proactively seeks to reduce the level of risk associated with all of the activities of flight training.

The essential goal of SMS is to broaden and strengthen YAM safety culture. A shared safety mindset is crucial to the establishment of a safety culture. A shared safety mindset emphasizes safety education, safety situational awareness, communication, and participation by all department employees, instructors, and students.

Training

Safety training will be an important step to the success of SMS. Safety training will be provided to all flight crews, mechanics, and volunteers during annual ground schools for each YAM aircraft. Training may also be provided periodically when there are changes to procedures, policies, and the SMS manual or if safety concerns arise.

Safety training includes, but is not limited to the following areas

- Understanding your role in the Safety Culture
- Reporting a safety concern
- Communication

YAM will develop and maintain a means for communicating safety information that ensures the following:

- Employees are aware of the SMS policies, processes, and tools that are relevant to their responsibilities.
- Conveys hazard information relevant to the employee's responsibilities.
- Explains why safety actions have been taken.
- Explains why safety procedures are introduced or changed.

The Safety Officer/SMS Coordinator is responsible for obtaining and distributing pertinent safety information. The bulletin board will be updated on a regular basis and contain information aimed at conveying safety awareness. Additionally, email, and regular meetings to distribute aviation safety information will be conducted.

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Chapter 5 Emergency Response Plan

It will be the policy of YAM to prevent accidents by placing safety as a paramount consideration above all others. In the event of an accident, every consideration must be given to injured and non-injured passengers and immediate families of passengers and crew. This concept also applies to the physical and mental comfort of passengers and their immediate families. This includes not only attention to medical requirements, but also to minor items such as the passenger's personal appearance and comfort.

The key to effective accident response is communication. A communications link, such as cell phone, portable radios, etc., between the scene of an accident and YAM offices at the Willow Run Airport is essential to an effective response.

Suggested Accident/Incident Communication Process (From International Council of Airshows)

Assess the Situation

Let emergency personnel do their job.

Get a full understanding of the incident.

Ensure key personnel are engaged with their emergency response assignments.

Centralize Communication

Identify a single POC for communication.

Know the facts, the nature of the incident, numbers of people involved.

Who is in charge operationally?

Engage the Press

Direct all inquiries to the POC.

Acknowledge grief, express empathy.

Give only the facts and assurance that the situation is under control.

Never argue, speculate, or lie. "I don't know but will find out." "Right now, our focus is on the incident." These are perfectly acceptable answers.

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Appendix 1

Yankee Air Museum Hazard Identification Report Form (HIR)

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Part A to be completed by the person identifying the safety issue or hazard.

Date of event	Local time		
Location:			
Name of Reporter	Section / Organization		

Please fully describe the event or identified hazard:

Include your suggestions on how to prevent similar occurrences.

In your opinion, what is the likelihood of such an event or similar happening or happening again?

Unlikely 1	Probable 2	Likely 3
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What do you consider could be the worst possible consequence if this event did happen or happened again?

Negligible 1	Serious Incident 3	Fatal Accident 5
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Part B To be completed by the Safety Officer.

The report has been dis-identified and logged.

Report Reference		
Signature		Date:
Name		

If further investigation is needed, perform that now and document on the investigation form. This information will support the Safety Committees activities.

Part C To be completed by the Safety Committee.

Rate the likelihood of the event occurring or recurring:

Unlikely 1	Probable 2	Likely 3
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Rate the most credible worst-case consequences?

Negligible 1	Serious Incident 3	Fatal Accident 5
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What action or actions have been or are being taken to prevent the issue or hazard from occurring in the future and/or to mitigate its consequences?

Resources required	
Responsibility for Action	

Agreed and accepted by

Chairman of the Board of Directors	Date
Executive Director	Date
Director of Flight Operations	Date

Appropriate Feedback given to staff by Safety Officer	Date
Signed:	

Follow up	
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Who	
When	

Appendix 2

Yankee Air Museum Safety Investigation Form

To be completed by the person investigating the safety issue or hazard.

Original Safety Report reference			
Date of event		Local time	
Location:			
Name of		Section / Organization	

Describe what happened:

Describe why the issue happened and any factors associated with it: "Root Cause"

Appendix 3

**YANKEE AIR MUSEUM
FLIGHT INCIDENT REPORT (FIR)**

To: Randy Hotton 734 255-5895 pilotyip@aol.com	From: (Optional)	Date: Aircraft:
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Instructions: Fill out form using additional sheets, as necessary. Forward the completed form to the Safety Officer. Thank you for your interest in the Safety Program!

Type of event – check all appropriate responses

<input type="checkbox"/> Human factor error	<input type="checkbox"/> Runway/taxiway excursion	<input type="checkbox"/> Foreign object damage
<input type="checkbox"/> Altitude deviation	<input type="checkbox"/> Runway incursion	<input type="checkbox"/> Severe wake turbulence
<input type="checkbox"/> Navigational deviation	<input type="checkbox"/> Severe turbulence	<input type="checkbox"/> Collision hazard
<input type="checkbox"/> Communication error	<input type="checkbox"/> Severe icing	
<input type="checkbox"/> Crewmember incapacitation		
<input type="checkbox"/> Aborted takeoff	<input type="checkbox"/> Other _____	

Weather conditions – check all appropriate responses

<input type="checkbox"/> IMC	<input type="checkbox"/> Thunderstorm	<input type="checkbox"/> Icing
<input type="checkbox"/> VMC	<input type="checkbox"/> Turbulence	<input type="checkbox"/> Crosswind
<input type="checkbox"/> Precipitation	<input type="checkbox"/> Windshear	<input type="checkbox"/> Other _____

Date/time – check or fill out all appropriate responses

Date: _____
Time:(Local) _____

Mode of flight – check all appropriate responses

<input type="checkbox"/> Ramp	<input type="checkbox"/> Climb	<input type="checkbox"/> Descent
<input type="checkbox"/> Taxi	<input type="checkbox"/> Cruise	<input type="checkbox"/> Approach
<input type="checkbox"/> Takeoff	<input type="checkbox"/> Holding	<input type="checkbox"/> Landing

Action taken - check all appropriate responses

<input type="checkbox"/> Performed emergency procedure	<input type="checkbox"/> Declared emergency	<input type="checkbox"/> Followed checklist
<input type="checkbox"/> In-flight engine shutdown	<input type="checkbox"/> Requested crash/rescue	<input type="checkbox"/> Followed SOP
<input type="checkbox"/> Requested medical assistance	<input type="checkbox"/> Diverted from destination	<input type="checkbox"/> Other _____

7. Crewmember's assessment.

Was the above procedure/checklist adequate for this situation? ☐ Yes ☐ No

Was the training adequate for this situation? ☐ Yes

☐ No

8. Comments or suggestions: